

STATEMENT OF LEGAL AND FACTUAL BASIS

(July 30, 2004 permit modification
Adding permit Section XII, NOx Budget Trading Program Requirements)

Georgia-Pacific Corp.; Big Island, VA

Permit No. VA-30389

Permit Date: July 30, 2004 Modification to 5-28-03 Title V Permit

Registration No. 30389

AFS ID No. 51-019-0003

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Georgia-Pacific Corp. has applied for, and received from VA DEQ in 2003, a Title V Operating Permit for its pulp and paper mill at Big Island, VA. As required by 9 VAC 5 Chapter 140 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution, Georgia-Pacific Corp. has applied for a NOx Budget Trading Program Permit for the facility. The Department has reviewed the application and prepared a **minor modification to the Title V Operating Permit to add a section entitled "NOx Budget Trading Program," Section XII.**

FACILITY INFORMATION

Permittee and Facility Location

Georgia-Pacific Corp.

Big Island Mill

9363 Lee Jackson Highway

Big Island, VA 24526

FACILITY GENERAL DESCRIPTION:

SIC Code 2631, paperboard mills.

Georgia-Pacific Corporation Big Island Mill is a manufacturer of corrugating medium paper using pulp produced from recycled old corrugated containers (OCC) and semichemical pulp, and linerboard paper produced from 100% recycled OCC. The facility has the potential to operate

twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year. The facility is permitted to manufacture 864 oven dry tons of semichemical virgin pulp per day, and has a nominal capacity to recycle 37.5 tons of paper per hour.

This source is located in an attainment area for all pollutants, and is a PSD major source.

CURRENT MODIFICATION:

The current July 2004 Title V permit minor modification is only to add a "NOx Budget Trading Program" section, Section XII, to the permit. This adds additional "applicable requirements" to the permit. The requirements are found in 9 VAC 5 Chapter 140 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. The NOx Budget Trading Program begins May 31, 2004. The only other permit changes are the corresponding necessary changes to update page 1, the Table of Contents, and the headers on each page to replace all the pages of the permit to have a complete updated permit document.

WHAT EQUIPMENT IS INVOLVED:

The NOx Budget Trading Program for this facility involves **only the No. 4 and No. 6 Power Boilers** because each of them has a fossil fuel burning input rated capacity exceeding 250 million Btu/hr. The No. 4 Power Boiler burns coal and distillate oil (primarily coal). The No. 6 Power Boiler burns natural gas, propane, and diesel fuel (primarily natural gas).

The No. 5 Power Boiler is not in the NOx Budget Trading Program because its input rated capacity is less than 250 million Btu/hr when burning fossil fuel, even though its capacity exceeds 250 million Btu/hr when burning certain non-fossil fuels.

CONFIDENTIAL INFORMATION - None.

The permittee did not submit a request for confidentiality with the NOx Budget Trading Program application.

PUBLIC PARTICIPATION

The public participation procedure for minor modifications to Title V permits is that EPA has a 45 day review period to comment. EPA's review period was from May 26, 2004 through Monday July 12, 2004, but EPA did not comment.

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
South Central Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Georgia-Pacific Corporation
9363 Lee Jackson Highway, Big Island, VA, Bedford
UTM Coordinates are ZONE: 17 EASTING: 645.2 km NORTHING: 4155.2 km
Permit No. SCRO 30389

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Georgia-Pacific Corporation has applied for a Title V Operating Permit for its Big Island facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date: _____

Air Permit Manager: _____ Date: _____

1 GENERAL

FACILITY INFORMATION

Permittee

Georgia-Pacific Corporation
9363 Lee Jackson Highway
Big Island, VA 24526

Facility

Georgia-Pacific Corporation, Big Island Mill
9363 Lee Jackson Highway
Big Island, VA 24526

AIRS ID No. 51-019-0003

SOURCE DESCRIPTION

Georgia-Pacific Corporation is a manufacturer of corrugating medium paper using pulp produced from recycled old corrugated containers (OCC) and semichemical pulp, and linerboard paper produced from 100% recycled OCC. The facility has the potential to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year. The facility is permitted to manufacture 864 oven dry tons of semichemical virgin pulp per day, and has a nominal capacity to recycle 37.5 tons of paper per hour.

This source is located in an attainment area for all pollutants, and is a PSD major source. The facility was previously permitted under the following permits:

- Minor NSR Permit issued on 6/30/95, as amended 2/26/03 (Minimill ⇔ Boiler 6 and Linerboard)
- Minor NSR Permit issued on 11/21/96, (Boiler 5) (See also Section 4.1 below)
- Minor NSR Permit issued on 8/31/00, superseded 2/7/03 (new chemical recovery system) and
- Minor NSR Permit issued on 7/10/02 (wastewater sludge stabilization system)

SIC Code: 2631 – Paperboard mills

EMISSIONS SUMMARY:

PLANTWIDE EMISSIONS SUMMARY [TONS PER YEAR]		
CRITERIA POLLUTANTS	POTENTIAL EMISSIONS	2001 ACTUAL EMISSIONS
Particulate Matter (PM10)	513	423
Nitrogen Oxides (NOx)	1,067	883
Sulfur Dioxide (SO2)	1,430	1,359
Carbon Monoxide (CO)	8,771	7,314
Volatile Organic Compounds (VOC)	2,321	1,919

TITLE V PROGRAM APPLICABILITY BASIS:

This facility has the potential to emit greater than 100 tons per year of Particulate Matter (PM-10), Nitrogen Oxides (NOx), Sulfur Dioxide (SO2), Carbon Monoxide (CO), and Volatile Organic Compounds (VOCs). Due to this facility's potential to emit over 100 tons per year of a criteria pollutant, Georgia-Pacific Corporation is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 9 VAC 5 Chapter 80 Article 1.

COMPLIANCE STATUS

As of 1/30/03, Georgia-Pacific's Big Island mill was in compliance with all procedural requirements and there were no outstanding Consent Orders or Notices of Violation.

2. APPLICABLE REGULATIONS/EXISTING PERMITS

2.1 Fuel Burning Equipment

2.1.1 No. 4 Boiler (PWR04)

The No. 4 boiler (PWR04) is a coal-fired unit, which was built in 1943 and was installed at GP in 1965. The boiler starts up on distillate oil and has a maximum rated heat input capacity of 284 MMBtu/hr. There is no pre-construction permit for this boiler.

Limits: Because the No. 4 boiler was in operation at GP prior to 3/17/72, the applicable emission and opacity limits are as follows:

1. PM: 0.21 lb/MMBtu (9 VAC 5-40-900)
2. SO2: 750 lb/hr (9 VAC 5-40-930)
3. Opacity: 20%, except one six-minute period during any one hour at 60% (9 VAC 5-40-80)

There is a multicyclone and an Electrostatic Precipitator (ESP) that control PM emissions from the No. 4 boiler.

Additional Requirements: Because the No. 4 boiler is a fossil-fuel fired steam generator with a maximum heat input greater 250 MMBtu/hr, the unit is required to have a continuous opacity monitor (9 VAC 5-40-1000).

2.1.2 No. 5 Boiler (PWR05)

The No. 5 boiler (PWR05) was built in 1947 and was installed at GP in 1977. The unit was originally permitted 1/28/75 and the most recent permit for the unit is dated 11/21/96. The approved fuels for the No. 5 boiler are wastepaper pellets, wood, rubber, coal, used oil produced on-site, Old Corrugated Container Reject (OCCR) material, and plytrim. The maximum rated fossil fuel heat input capacity is 243 MMBtu/hr when the unit is firing 100% coal. The maximum rated heat input capacity is 339 MMBtu/hr when the unit is firing wood and OCCR.

Limits: The following limits are carried forward from the 11/21/96 permit into the Title V permit.

1. A multicyclone and an Electrostatic Precipitator (ESP) control PM emissions from the No. 5 boiler,
2. Specifications for the approved composition of the wastepaper pellets, and used oil,
3. Allowable consumption rates of wastepaper pellets, OCCR, rubber, used oil, and plytrim,
4. Allowable emission rates, and
5. Allowable opacity.

All initial compliance testing and notifications required by the 11/21/96 permit have been completed.

Additional Requirements

Both the No. 4 Boiler and the No. 5 Boiler have dedicated mechanical collectors (ie., multicyclones). After the mechanical collectors, there are (2) ESPs (PWRCD02 and PWRCD04). PWRCD02 is primarily for the No.4 Boiler, and PWRCD04 is primarily for the No. 5 Boiler. Each ESP has its own stack (E26 and E27, respectively) and there is a continuous opacity monitor (COM) in each stack. However, there is also crossover breeching with normally open dampers that connects the exhaust streams from Boilers 4 and 5 after the mechanical collectors but prior to the ESPs. Therefore due to this equipment arrangement, any applicable requirements related to the No. 4 Boiler emission point location (E26) also apply to stack E27.

2.1.3 No. 6 Boiler (PWR06)

The "minimill" received a pre-construction permit dated 6/30/95. (On 2/26/03, the 1995 permit was amended. The scope of this amendment was the change in excess emission reporting frequency from quarterly to a semi-annual basis.) The No. 6 boiler (PWR06) was part of the minimill equipment. The approved fuels for the No. 6 boiler are natural gas, diesel fuel, and propane. The maximum rated heat input capacity for the unit is 284.9 MMBtu/hr.

Limits: The following limits are carried forward from the 6/30/95 permit, as amended 2/26/03, into the Title V permit.

1. NO_x emissions are controlled by low NO_x burners for each fuel,
2. Maximum sulfur content of the diesel fuel is 0.05 percent by weight,
3. Allowable consumption rates of natural gas, diesel fuel, and propane,
4. Allowable emission rates, and
5. Allowable opacity

The following requirements contained in the 6/30/95 permit, as amended 2/26/03, have been completed and so are not included in the current T5 permit:

- Installation, performance evaluation, and initial auditing of NO_x CEM systems,
- Initial excess emissions reporting,
- Initial testing (including VEEs; excluding COM initial evaluation) of No. 6 Boiler,
- Commencement of construction, startup, performance test notifications (excluding COM initial evaluation)
- The requirement to develop and implement a NAAQS demonstration for SO₂

Additional Requirements

1. The 1995 pre-construction permit included a requirement to make the No. 3 Boiler inoperable upon startup of the No. 6 Boiler. This requirement has been completed and so is not included in the current T5 permit. However, the same condition also specified that if the No. 3 boiler was reactivated, the 1995 permit might be subject to PSD review. This portion of the 1995 permit condition is carried forward into the T5 permit.
2. Continuous emission monitors for NO_x, and CO₂ or O₂ are required,
3. A continuous emission monitor for opacity is required when the No. 6 boiler is firing diesel fuel, and
4. Extensive steam balance calculations, recordkeeping, and reporting is required to ensure that the 1995 permit action did not trigger PSD review.

2.2 Process Equipment

2.2.1 Chip Handling (CH01 thru CH03)

Applicable requirements for Chip Handling are found in 9 VAC 5-50-80, Standard for visible emissions, and 9 VAC 5-50-90, Standard for Fugitive Dust/Emissions. These requirements are placed in the Title V permit as part of the Facility Wide Conditions and the General Conditions, respectively.

2.2.2 Pulp Mill Equipment (PULP01 thru PULP08)

There is no pre-construction permit for the Pulp Mill Equipment.

Limits:

1. Because GP Big Island is a semichemical pulp mill, the requirements of 40 CFR 63 Subpart S (MACT I) apply to the Low Volume, High Concentration system (LVHC). By definition, the LVHC is the collection of equipment including the digester and evaporator

systems, and any other equipment serving the same function. GP considers the digester as part of the Pulp Mill equipment, and the evaporators as part of the Chemical Recovery equipment. These requirements are set forth in the Title V permit.

2. Because all Pulp Mill Equipment, except the New Blow Tank portion of the Digester system (PULP02), was in operation at GP prior to 3/17/72, the applicable opacity limit for this equipment is: 20%, except one six-minute period during any one hour at 60% (9 VAC 5-40-80). For the New Blow Tank the opacity limit is 20%, except one six-minute period during any one hour at 30% (9 VAC 5-50-80).
3. In order to avoid PSD review, the 2/7/03 permit for the new chemical recovery system using gasification included a throughput limit for the pulp washers (PULP03). This requirement is carried forward in the Title V permit.

2.2.3 Chemical Recovery Equipment (REC01 thru REC11, and the New Chemical Recovery System)

MACT I:

See discussion in "Pulp Mill Equipment" section above.

MACT II:

The current chemical recovery system at Big Island uses two smelters. On 1/12/01, the National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and stand-alone Semichemical Pulp Mills (MACT II) were published in the Federal Register. Unless changes are made to the current chemical recovery system, it will not be in compliance with the MACT II standards on the applicable compliance date (ie., 3/13/04).

Therefore, GP sought and received a permit (dated 8/31/00, superseded 2/7/03) for the construction and operation of a "new chemical recovery system." GP intends to use a technology that is new to the pulp and paper industry (ie., steam reforming gasification) for the new chemical recovery system. This leads to the following provisions in the permit:

- a. The "Kraft liquor trials" will allow limited duration operation of the new chemical recovery system in order to perform testing requested by the US Department of Energy. During these trials, the gasification chemical recovery system will process black liquor produced at a kraft mill, and the smelters will be reactivated to process the black liquor produced at the Big Island, semichemical mill.
- b. In light of the innovative nature of the gasification chemical recovery system, the strategy for the pre-construction permit action was as follows:

The gasification system equipment was permitted for installation and operation. However, the initial emissions limits for the new system were based generally on the more fully known (and expected to be higher) emission factors for conventional technology (i.e., a recovery boiler). Finally, the permit included a requirement to

reduce the allowable emissions from gasifier system as indicated by a series of required stack tests.

- c. This gasification system will be the first demonstrated on a commercial scale for the pulp and paper industry, and there is some risk that it may not operate successfully. A limited extension to the otherwise applicable MACT II compliance date is provided in the site-specific provisions of the regulation if the extension is needed in order to replace the gasifier technology with conventional recovery boiler technology should the steam reforming ultimately fail. (See also the second paragraph of section 3.2.2.1 below.)

Construction on the new chemical recovery system is not complete. Therefore, the Title V permit separates applicable requirements for the chemical recovery equipment by either the smelter based system or gasification based system.

Limits for the Existing Smelters: Because the Smelters were in operation prior to 3/17/72 and are subject to MACT II the applicable emission and opacity limits in the Title V permit are as follows:

1. Opacity for Smelters: 35% (9 VAC 5-40-1710)
2. Opacity for Chemical Recovery Equipment other than the Smelters: 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 60% opacity (9 VAC 5-40-80)
3. PM for the Smelters: 3.00 lbs/equivalent ton of air dried pulp (9 VAC 5-40-1680)
4. Total Hydrocarbons (THC) for the Smelters: MACT II limits in accordance with the timing as discussed in sections 2.2.3. a and 3.2.2.1.
5. PM for the Smelter Dissolving Tank: 0.75 lbs/equivalent ton of air dried pulp (9 VAC 5-40-1680)
6. MACT II: compliance date, monitoring, recordkeeping, testing, and reporting requirements

There is a venturi scrubber and mist eliminator in the common stack for the two smelters (R45).

Limits for the New Chemical Recovery System (gasification):

MACT II compliance date, monitoring, recordkeeping, testing, and reporting requirements are included in the Title V permit.

The following limits and requirements are carried forward from the 2/7/03 permit into the Title V permit:

1. A fabric filter controls PM emissions from the media bin,
2. NOx emissions from the steam generation unit (Recovery Boiler) controlled by low NOx burners,
3. Sulfur dioxide in the system flue gas controlled by a scrubber,
4. A flare used to control emissions during startup and upset conditions,
5. Allowable consumption rate of Black Liquor Solids (BLS),
6. Approved fuels are natural gas and product gas,
7. Specification for operation, recordkeeping and reporting during the Kraft Liquor Trials,

8. Requirement to ultimately make the smelters permanently inoperable,
9. Allowable emission rates (including a provision for their reduction),
10. Allowable opacities,
11. Initial performance testing (Note, the initial performance test is to be a 30-day test accomplished using the CEM in accordance with NSPS Db (see 40 CFR 60.44b (i)). Also, on 2/14/03, in EPA's letter from J. Katz to J. Johnson, EPA approved an alternative monitoring approach for use of the CEM to demonstrate on-going compliance.), and
12. Notifications.

Note: The new chemical recovery system has only one stack and it exhausts the emissions from the reformer, the steam generation, and the product-gas cleanup systems. In order to help clarify the applicable requirements the current draft permit uses the term "Reformer Boiler stack" to indicate applicable requirements derived from NSPS Db, and the term "new recovery boiler stack" to indicate applicable requirement derived from some source other than NSPS Db.

It is anticipated that the changes in chemical recovery equipment necessary for GP to come into compliance with the requirements of MACT II will insure that the chemical recovery process is in compliance with the applicable opacity standard.

2.2.4 Medium Mill Equipment (MM01 thru MM09)

There are no applicable federal requirements for the Medium Mill equipment. The applicable opacity requirement, given in 9 VAC 5-40-80 (20% opacity limit, except for one six minute period in any one hour in which visible emissions shall not exceed 60% opacity) is included in the Title V permit.

2.2.5 Linerboard Mill Equipment (LBD01 thru LBD08)

The Linerboard Mill Equipment was part of the "minimill" equipment permitted on 6/30/95, as amended 2/26/03. The following limits and requirements from the 6/30/95 permit, as amended 2/26/03, are carried forward into the Title V permit:

1. A fabric filter controls PM emissions from the starch silo,
2. Allowable emission rates from the recycled paper process facility and the No. 4 paper machine, and
3. Allowable opacity from the Linerboard Mill and the starch silo.

2.2.6 Wastewater System (WW01 and WW02)

A wastewater sludge lime stabilization system was permitted on 7/10/02. The following limits and requirements from the 7/10/02 permit are carried forward into the Title V permit:

1. Allowable annual lime throughput,
2. Allowable opacity from the silo fabric filter,
3. A fabric filter controls PM from the lime silo, and
4. Visible Emissions Evaluations (VEEs).

There are no other applicable federal or state requirements for the Wastewater System.

2.2.7 Miscellaneous Activities (MIS01 thru MIS04)

Applicable requirements for activities MIS01, paved roads, MIS02 unpaved roads, and MIS03, Landfill Activities, are found in 9 VAC 5-40-90, Standard for Fugitive Dust/Emissions. These requirements are placed in the Title V permit as part of the General Conditions.

The solvent-based parts washers (MIS04) do not use halogenated solvents. These parts washers are identified in the permit application as insignificant due to VOC emission level and are included as such in the T5 permit.

2.2.8 General Conditions; Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61Subpar M.

This general condition contains a citation from the Code of Federal Regulations as follows:

- 40 CFR 61, National Emissions Standard for Hazardous Air Pollutants (NESHAPs),
- 40 CFR 61.145, NESHAPs Subpart M, National Emissions Standards for Asbestos as it applies to demolition and renovation,
- 40 CFR 61.148, NESHAPs Subpart M, Standard for Insulating Materials, and
- 40 CFR 61.150, NESHAPs Subpart M, Standard for Waste Disposal for Manufacturing, fabricating, demolition, renovation, and spraying operation.

3. PERIODIC MONITORING

3.1 Fuel Burning Equipment

3.1.1 No. 4 Boiler (PWR04)

Emission Limits:

For PM, the maximum emission rate (calculated using the current AP-42 emission factor, the maximum rated capacity of the boiler and the standard control efficiency of an ESP) is 0.05 lbs/MMBtu, as opposed to the regulatory emission limit of 0.21 lbs/MMBtu. Therefore, the permitted limit is more than 4 times the calculated maximum emission rate. Furthermore, the current draft permit requires stack testing for PM once per permit term. Therefore the periodic monitoring for PM from the No. 4 boiler is considered satisfied. (Note: Historically, GP has taken the position that performing stack testing on the No. 4. Boiler while the crossover breeching is closed does NOT represent normal operation. Therefore, the once per term testing of both the No. 4 Boiler and the No. 5 Boiler are required to be concurrent.)

The SO₂ emission limit is based on the regulatory standard for existing fuel burning equipment, (ie., 2.64K). For the No. 4 boiler, using the current AP-42 emission factor, this limit is approximately equal to a coal sulfur content of 1.75 percent. The reported sulfur content for the coal used at Big Island is 1 percent. The current Title V permit requires that the permittee maintain records of this coal sulfur content. Therefore, the periodic monitoring for SO₂ from the No. 4 boiler is considered satisfied by the fuel sulfur content recordkeeping requirements included in the Title V permit.

Opacity:

Monitoring of compliance with the opacity limit for the No. 4 boiler is considered satisfied by the continuous Opacity Monitor (COM).

3.1.2 No. 5 Boiler (PWR05)

Emission Limits:

The No. 5 boiler has emission limits for Particulate Matter (PM), PM-10, Sulfur Dioxide (SO₂), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Volatile Organic Compounds (VOCs), (ie., Criteria Pollutants), and Barium, Cadmium, Chromium, Chromium (+6), Mercury, Manganese, Nickel, Lead, Zinc, and HCl (ie., Toxic Pollutants). The limits for the Criteria Pollutants are the worst case fueling scenarios for the boiler firing at capacity, and using emission factors from AP-42, the EPA document "Burning Tires for Fuel and Tire Pyrolysis," and vendor guarantees. The limits for the Toxic Pollutants are generated using the worst case fueling scenarios for the boiler firing at capacity, the allowable fuel composition, and material balances. (See also, "Other Requirements" below.)

For PM and PM-10, the No. 5 boiler is required to have a multicyclone and an electrostatic precipitator (ESP), and this boiler exhausts through a stack with a continuous opacity monitor. Furthermore, the current draft permit requires stack testing of particulate matter once per permit term. (See also, the note in paragraph 1 of section 3.1.1, Emission Limits.) Therefore, these limits are not expected to be exceeded and the periodic monitoring requirement is considered satisfied by the fuel throughput and composition recordkeeping requirements, the control equipment requirements, the opacity monitoring requirements, and the once-per-term testing in the current Title V permit.

Opacity:

Due to the crossover breeching arrangement, periodic monitoring for opacity from the No. 5 Boiler is by the COM which is required by regulation to service the No. 4 Boiler.

Other Requirements:

The Title V permit includes fuel composition specifications for both the wastepaper pellet fuel and for the used oil fuel. GP is required to receive and maintain signed certifications that all shipments of wastepaper pellets meet this specification. Also, on a specified regular basis, GP is required to have an analysis performed by an independent laboratory of the composition of the used oil combusted in the No. 5 boiler. GP must maintain records of the results of these analyses. Therefore, the recordkeeping requirements in the Title V permit are considered to satisfy the periodic monitoring requirements related to fuel composition for these two fuels.

3.1.3 No. 6 Boiler (PWR06)

Emission limits:

The No. 6 boiler has emission limits for Particulate Matter (PM), PM-10, Sulfur Dioxide (SO₂), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Volatile Organic Compounds (VOCs), and Formaldehyde. For each of the three approved fuels, short term emission limits are based on for the boiler firing at capacity, and using emission factors from AP-42, and vendor guarantees. For PM, PM10, CO, VOC, and formaldehyde, the annual limits are the worst case fueling scenarios

for the boiler firing at capacity, and using emission factors from AP-42. Therefore, these limits are not expected to be exceeded and the periodic monitoring requirement is considered satisfied by the fuel throughput recordkeeping, and the startup, shutdown, and malfunction recordkeeping requirements in the current Title V permit.

For SO₂, the Title V permit includes a fuel sulfur content limit, and requires certification and recordkeeping to verify the actual fuel sulfur content. Furthermore, an extensive system of fuel flow and steam flow monitoring equipment is required in the pre-construction and Title V permits. Data from the flow monitoring systems is used in an equation defined in the permit. This equation must be considered regularly to track the SO₂ emission rate, and if there is an exceedance of annual limit, GP must report this in writing. Therefore, the periodic monitoring requirements for SO₂ emissions from the No. 6 boiler are considered satisfied by the hardware, recordkeeping and reporting requirements in the Title V permit.

For NO_x, the Title V permit requires low-NO_x burners for each approved fuel, and a NO_x CEM on the No. 6 boiler stack. Data from the CEM and the flow monitoring systems described above is used in a set of equations defined in the permit. These equations must be considered regularly to track the NO_x emission rate, and if there is an exceedance of either the daily or annual limit, GP must report this in writing. Therefore, the periodic monitoring requirements for NO_x emissions from the No. 6 boiler are considered satisfied by the hardware, recordkeeping and reporting requirements in the Title V permit.

Opacity:

From the pre-construction permit, the No. 6 Boiler has the requirement to have a Continuous Opacity Monitor (COM). The origin of this applicable requirement is NSPS Subpart Db. However, in accordance with that NSPS, the COM is only required to be operated when the boiler is firing distillate oil fuel. The No. 6 boiler has not yet had its initial combustion of this type fuel. Therefore, Title V permit includes periodic monitoring requirements for opacity from the No. 6 boiler based on a weekly observation for the presence or absence of visible emissions. The permittee will keep a log of observations, any corrective actions taken, and any VEE recordings. After the required performance evaluation of the COM is completed, the permit allows the use of the COM in lieu of the weekly observation

3.2 Process Equipment

3.2.1 Pulp Mill Equipment

Opacity:

Periodic monitoring requirements for opacity from Pulp Mill equipment are based on weekly observation for the presence or absence of visible emissions. The permittee will keep a log of observations, any corrective actions taken, and any VEE recordings.

Other Requirements.

MACT I includes extensive monitoring and recordkeeping requirements for the LVHC portion of the pulp mill, and these requirements are included in the current Title V permit. Also, the source is required to keep records of malfunctions of any equipment that may cause a violation of any portion of the permit.

With the opacity observations and required recordkeeping, and MACT I monitoring and recordkeeping requirements, the periodic monitoring requirements for the Pulp Mill equipment is considered satisfied.

3.2.2 Chemical Recovery Equipment

3.2.2.1 Current Chemical Recovery System using Smelters

Emission limits:

The smelters and the smelt dissolving tank, each have emission limits for Particulate Matter based on 9 VAC 5 Chapter 40 Part 11, Article 13, Emission Standards for Kraft Pulp Mills. The smelters are also required to operate a scrubber and mist eliminator to control particulate emissions. The use of the control device is expected to allow the smelters to meet the PM emission limit on an on-going basis. (Note, the smelters have been stack tested and shown to be in compliance with the PM standard.) The Smelt Dissolving Tank is a relatively wet process, and thus is expected to meet the applicable PM emission limit.

The smelters have a Total Hydrocarbon emission limit based on MACT II, however, the otherwise applicable compliance date of 3/14/04 is extended by two actions. The first action is DEQ's letter dated 12/16/02 which, using the general provisions of Part 63, extends the compliance date to 3/1/05. The second action is EPA's site-specific provisions for the Big Island mill in MACT II. The current calendar date in these site-specific provisions is 3/1/07 (see 40 CFR 63.863). Anticipated forthcoming revisions to 63.863 will move the calendar date to 3/1/08. The current draft references the calendar date as specified in the current version of 40 CFR 63.863.

Opacity:

Due to the physical arrangement of the current chemical recovery system equipment, the extended steam plume as a result of the in-stack scrubber, and the surrounding topography, it is only possible to perform a valid Method 9 Visual Emissions Evaluation under certain meteorological conditions. Historically these meteorological conditions do not occur frequently at the Big Island site. Also, in order to comply with the requirements of MACT II, the existing smelters will be replaced with a new chemical recovery system and the date for this replacement is set in regulation. (See preceding paragraph for discussion of the compliance date.) (This replacement project was the subject of the Project XL Final Project Agreement signed by GP, EPA, the US Forest Service and DEQ on 5/31/00.) Therefore, the current Title V permit does not include an opacity periodic monitoring requirement for the existing smelters but it does include such requirements for the new (replacement) chemical recovery system. (See the discussion on opacity periodic monitoring requirements for the new system below.)

Other Requirements.

MACT I includes extensive monitoring and recordkeeping requirements for the portion of the current chemical recovery system that meets the definition of the LVHC system (ie., the evaporator system), and these requirements are included in the current Title V permit.

MACT II includes extensive monitoring and recordkeeping requirements for the semichemical combustion unit portion of the current chemical recovery system (ie., the smelters), and these requirements are included in the current Title V permit.

Also, the source is required to keep records of malfunctions of any equipment that may cause a violation of any portion of the permit.

With the control device requirements, and recordkeeping requirements, the MACT I monitoring and recordkeeping requirements for the evaporator system, and the MACT II monitoring and recordkeeping requirements, the periodic monitoring requirements for the current chemical recovery system (ie., using smelters) equipment is considered satisfied.

3.2.2.2 New Chemical Recovery System using Gasification

Emission limits:

The emission limits for the New Chemical Recovery System using Gasification are for Particulate Matter (PM), PM-10, Sulfur Dioxide (SO₂), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Total Hydrocarbons (THC), and Total Reduced Sulfur (TRS).

For PM, PM-10, SO₂, CO, and TRS, the limits are based on the system processing at capacity, and using vendor guaranteed emission factors. As described above, the emission limits for the new chemical recovery system using gasification were conservatively calculated based on state-of-the-art, conventional technology. As such, these emission limits are considered higher than would be expected in actual operation, and therefore, the margin of compliance is considered sufficient to assure compliance with these emission limits. (Also, the PM emission limit based on the existing source regulations is expected to be easily satisfied by the new chemical recovery system.) Furthermore, the pre-construction permit includes a requirement to reduce the allowable emissions from the gasifier system as indicated by a series of required stack tests. The reduced emission limits will be included in the Title V permit in the future and periodic monitoring requirements will be reconsidered at that time.

Because the Heat Recovery Steam Generating Unit (Recovery Boiler) portion of the new chemical recovery system fits the NSPS definition of a steam generating unit, the new chemical recovery system has a NO_x emission limit consistent with the requirements for NSPS Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. The NSPS also requires a continuous emission monitor (CEM) for NO_x. The CEM is considered to satisfy the NO_x periodic monitoring requirements. (Note, the pulse heaters are considered to meet the definition of process heaters and therefore are NOT subject to either NSPS Dc or Db.)

The new chemical recovery system has a THC emission limit consistent with the MACT II standard. The pre-construction and Title V permits include the MACT II requirement for the Administrator to approve monitoring for non-listed control techniques. Requirements of the approved monitoring will be included in the Title V permit in the future and periodic monitoring requirements will be reconsidered at that time. It is anticipated that the Administrator-approved monitoring requirement will likely satisfy the periodic monitoring requirements of Title V.

Opacity:

Periodic monitoring requirements for opacity from the new chemical recovery system (ie., using gasification) equipment are based on weekly observation for the presence or absence of visible emissions. The permittee will keep a log of observations, any corrective actions taken, and any VEE recordings. The flare is a safety device used during non-normal operation (ie., startup, shutdown, and malfunctions) therefore it is excluded from the weekly visual survey requirement.

Other Requirements.

MACT II includes extensive monitoring and recordkeeping requirements for the semichemical combustion unit portion of the new chemical recovery system. These requirements are included in the current Title V permit and are considered to satisfy the periodic monitoring requirements.

The meters for the sulfur dioxide scrubber flow rate, pH, and the differential pressure gage are required to have out of range alarms, and the permit requires regular observation of these devices. These alarms and observations are considered to satisfy the periodic monitoring requirements for these devices.

3.2.3 Medium Mill Equipment

Opacity:

Periodic monitoring requirements for opacity from the Medium Mill equipment are based on weekly observation for the presence or absence of visible emissions. The permittee will keep a log of observations, any corrective actions taken, and any VEE recordings.

3.2.4 Linerboard Mill Equipment

Emission limit:

The Linerboard Mill has a VOC emission limit for the recycled paper processing facility and for paper machine No. 4. The Title 5 permit also includes a requirement for an annual material balance, calculated monthly, to demonstrate compliance with the VOC limit.

Opacity:

Periodic monitoring requirements for opacity from the Linerboard Mill equipment are based on weekly observation for the presence or absence of visible emissions. The permittee will keep a log of observations, any corrective actions taken, and any VEE recordings.

3.2.5 Wastewater System Equipment (ie., lime silo)

Opacity:

Periodic monitoring requirements for opacity from the lime silo are based on weekly observation for the presence or absence of visible emissions. The permittee will keep a log of observations, any corrective actions taken, and any VEE recordings.

4. STREAMLINED REQUIREMENTS:

4.1 No. 5 Boiler

The 1/28/75 permit addresses the initial installation of the No. 5 Boiler. Compliance with the applicable requirements from the 11/21/96 permit as required by the current Title V permit ensures compliance with the applicable requirements from the 1/28/75 permit.

4.2 No. 6 Boiler

The No. 6 Boiler is subject to NSPS Subpart Db standard of NO_x which is 0.1 lb/MMBtu. Compliance with the NO_x emissions in the Title V permit, which are based on BACT (ie., 0.0315 for natural gas, 0.0885 for diesel fuel, and 0.0434 lb/MMBtu for propane), ensures compliance with the NSPS standard. Both BACT and NSPS regulatory citations are included in the Title V permit.

The No. 6 Boiler is subject to the NSPS Subpart Db standard of opacity of 20 percent, with one excursion to 27 percent per hour, when the unit is firing diesel fuel. Compliance with the opacity limits in the Title V permit, which are based on BACT (ie., 10 percent, with one excursion to 20 percent), ensures compliance with the NSPS standard. Both BACT and NSPS regulatory citations are included in the Title V permit.

5. GENERAL CONDITIONS:

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions

5.1 PERMIT EXPIRATION:

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by ' ' 2.1-20.01:2 and ' ' 10.1-1185 of the Code of Virginia, and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001".

5.2 FAILURE/MALFUNCTION REPORTING:

Section 9 VAC 5-20-180 requires malfunction and excesses emissions reporting within 4 hours. Section 9 VAC 5-80-250 also requires malfunction reporting; however, reporting is required within 2 days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to this section including Title 5 facilities. Section 9 VAC 5-80-250 is from the Title 5 regulations. Title 5 facilities are subject to both Sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within 4 day time business hours after the malfunction is discovered.

6. FUTURE APPLICABLE REQUIREMENTS:

None identified at this time.

7. INAPPLICABLE REQUIREMENTS:

Inapplicable requirements, including a description of the applicability, are listed in Condition X.

8. OPACITY EXCLUSION FOR EXISTING SOURCES:

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met.

Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

9. COMPLIANCE PLAN:

Not applicable.

10. INSIGNIFICANT EMISSION UNITS:

Insignificant emission units are listed in Condition IX.

11. CONFIDENTIAL INFORMATION:

No portion of the Title V permit application was identified as confidential.

12. LEGAL AND FACTUAL BASIS FOR DRAFT PERMIT CONDITIONS:

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the Commonwealth of Virginia Federal Operating Permit Regulations for the purposes of Title V of the Federal Clean Air Act (9 VAC 5 Chapter 80 Article 1), and underlying applicable requirements in other state and federal rules. Applicable requirement means all of the following as they apply to emission units in a Title V source:

- a. Any standard or other requirement provided for in the State Implementation Plan or the Federal Implementation Plan, including any source-specific provisions such as consent agreements or orders.
- b. Any term or condition of any preconstruction permit issued pursuant to 9 VAC 5-80-10, Article 8 (9 VAC 5-80-1700 et seq.) of this part or 9 VAC 5-80-30 or of any operating permit issued pursuant to 9 VAC 5 Chapter 80 Article 5, except for terms or conditions derived from applicable state requirements or from any requirement of these regulations not included in the definition of applicable requirement.
- c. Any standard or other requirement prescribed under these regulations, particularly the provisions of 9 VAC 5 Chapter 40 (9 VAC 5-40-10 et seq.), 9 VAC 5 Chapter 50 (9 VAC 5-50-10 et seq.) or 9 VAC 5 Chapter 60 (9 VAC 5-60-10 et seq.), adopted pursuant to requirements of the federal Clean Air Act or under ' 111, 112 or 129 of the federal Clean Air Act.

- d. Any requirement concerning accident prevention under ' 112(r)(7) of the federal Clean Air Act.
- e. Any compliance monitoring requirements established pursuant to either ' 504(b) or ' 114(a)(3) of the federal Clean Air Act or these regulations.
- f. Any standard or other requirement for consumer and commercial products under ' 183(e) of the federal Clean Air Act.
- g. Any standard or other requirement for tank vessels under ' 183(f) of the federal Clean Air Act.
- h. Any standard or other requirement in 40 CFR Part 55 to control air pollution from outer continental shelf sources.
- i. Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the federal Clean Air Act, unless the administrator has determined that such requirements need not be contained in a permit issued under this article.
- j. With regard to temporary sources subject to 9 VAC 5-80-130, (i) any ambient air quality standard, except applicable state requirements, and (ii) requirements regarding increments or visibility as provided in Article 8 (9 VAC 5-80-1700 et seq.) of this part.
- k. Any standard or other requirement of the acid deposition control program under Title IV of the Clean Air Act or the regulations promulgated thereunder.
- l. Any standard or other requirement governing solid waste incineration under ' 129 of the Clean Air Act.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 9 VAC 5 Chapter 80 Article 1 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the state but is not federally-enforceable is identified in the draft Title V permit as such.

13. REQUEST FOR VARIANCES OR ALTERNATIVES:

None

14. COMMENT PERIOD:

The public notice appeared in the Lynchburg News and Advance on March 1, 2003.

Beginning Date: March 1, 2003

Ending Date: March 31, 2003

All written comments should be addressed to the following individual and office:

Thomas H. Berkeley, PE
Senior Environmental Engineer
Department of Environmental Quality

South Central Regional Office
7705 Timberlake Road
Lynchburg, VA 24502
Phone: (434) 582-5120 Fax: (434) 582-5125

15. PROCEDURE FOR REQUESTING PUBLIC HEARING:

During the public comment period any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for a public hearing shall be in writing to the above address and shall state the nature of the issues proposed to be raised in the hearing. The Director shall grant such a request for a hearing if he concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.